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2008-04-01

Issues in Cost Estimating for US Naval Shipbuilding

Christopher S. Deegan

<http://hdl.handle.net/10945/33340>

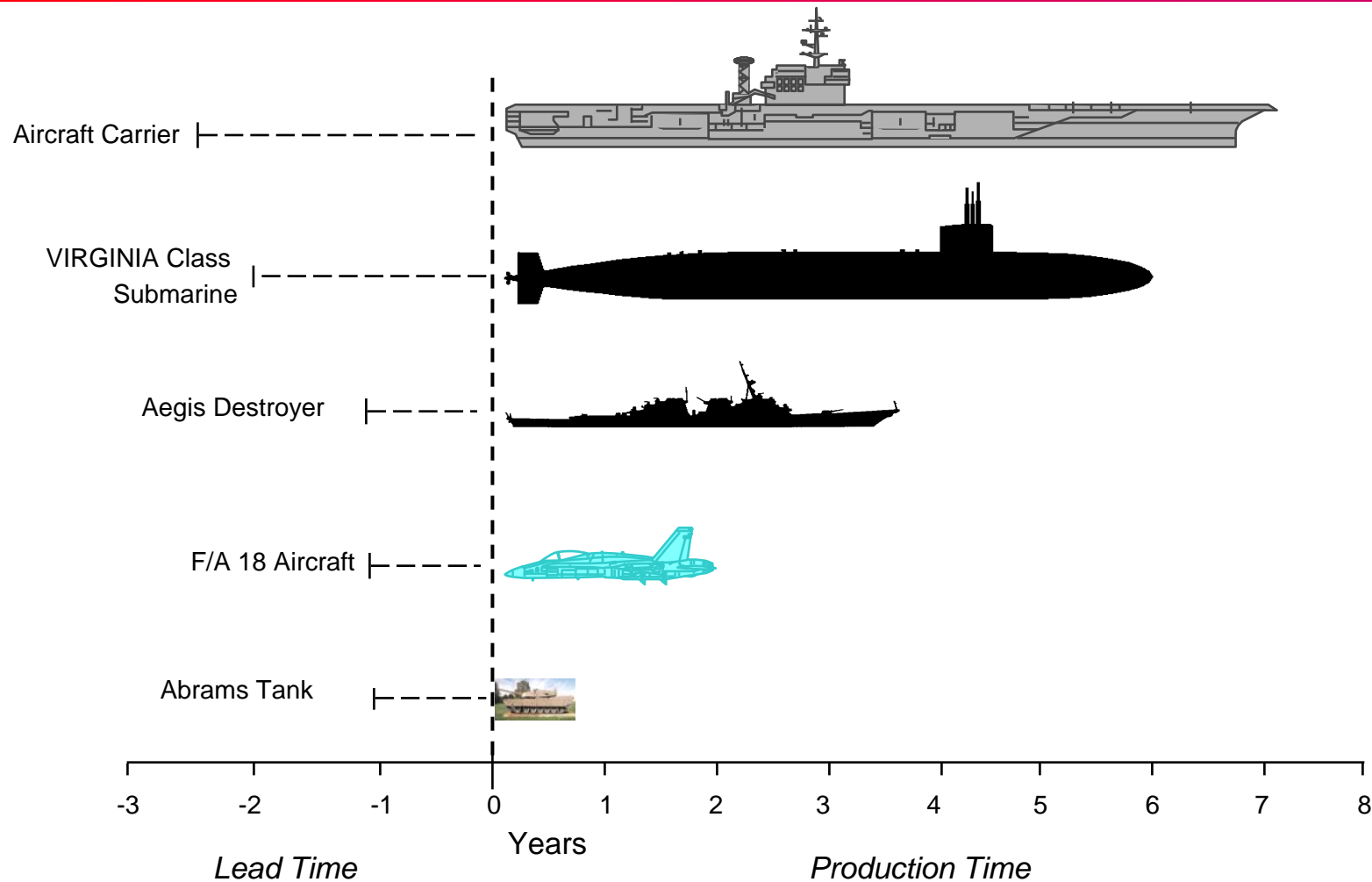


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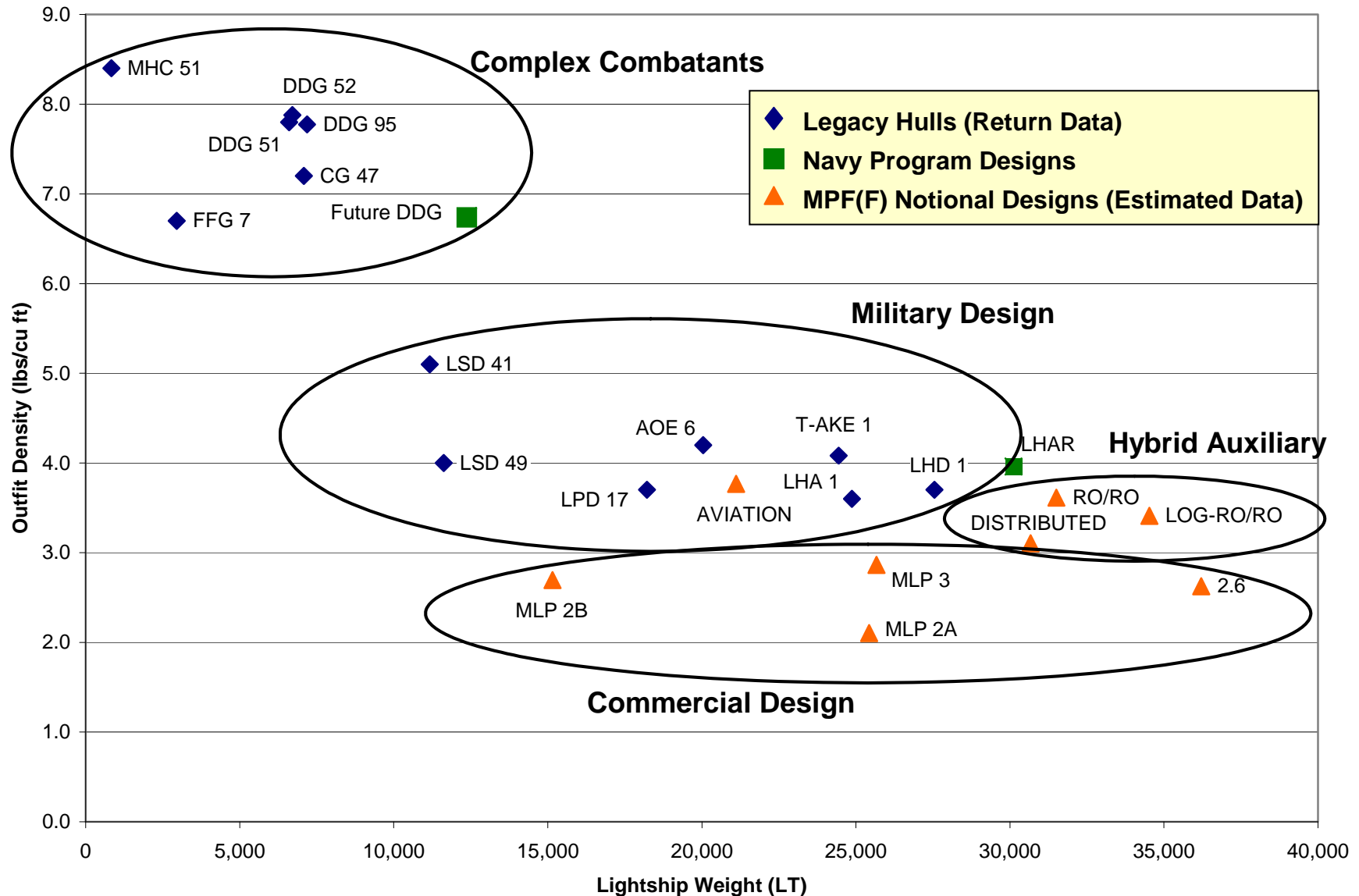
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Production Time Perspective



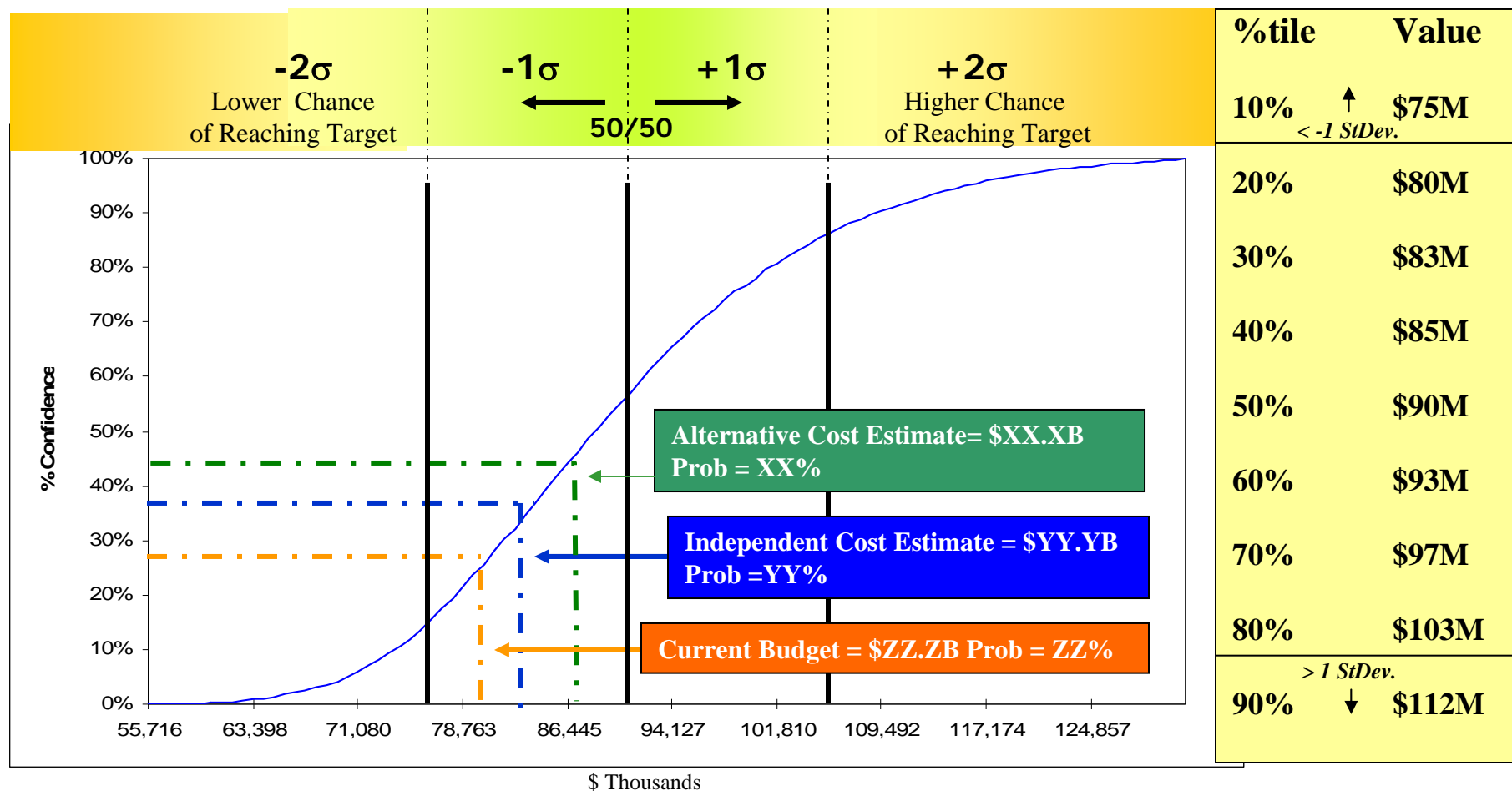
It takes 5-10 years to procure and deliver a Navy Combatant ship

Outfit Density vs. Lightship Weight

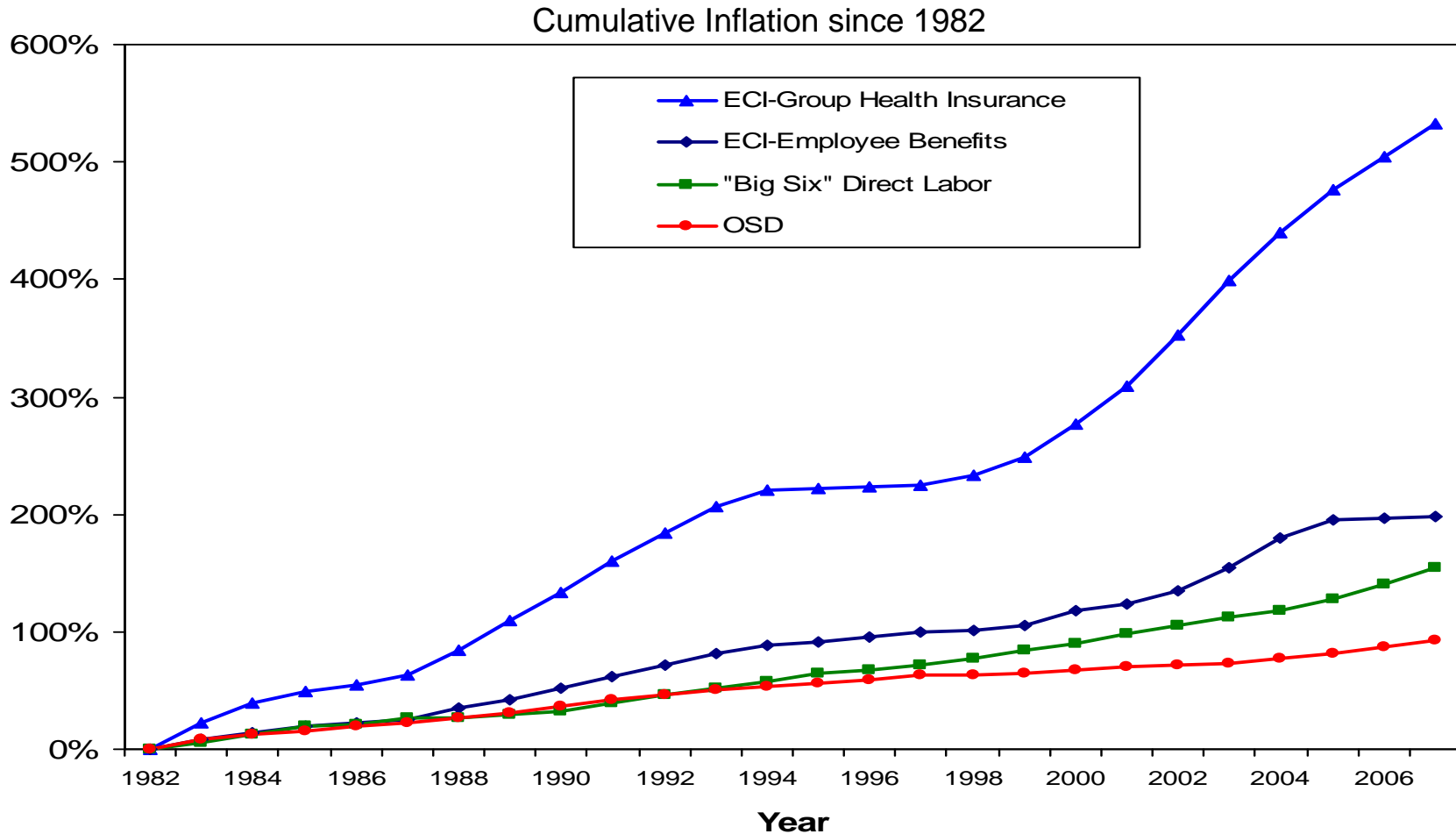




Representative SCN Compiled Cost Risk Curve

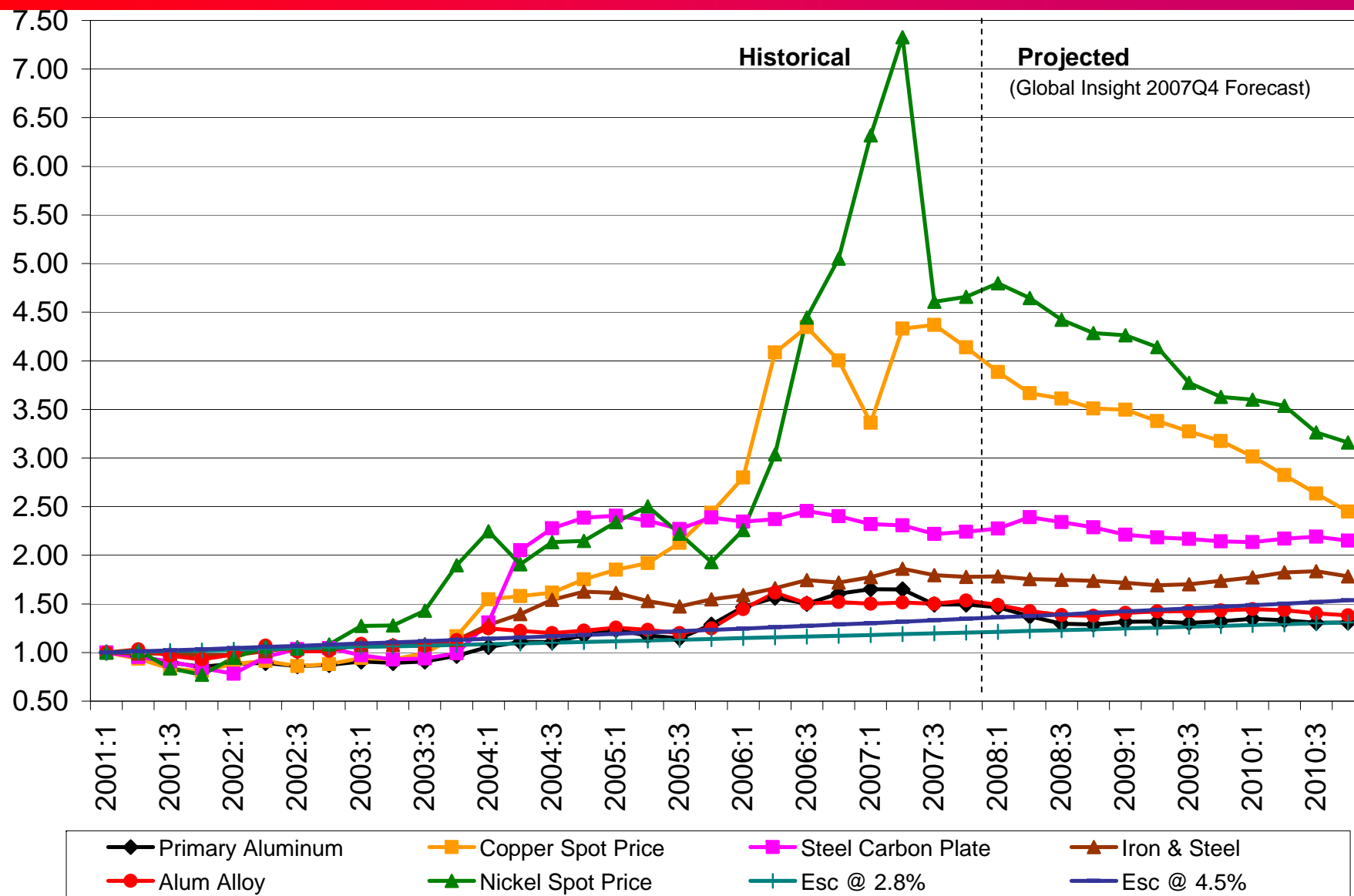


Labor/Overhead Cost Inflation



National Effects of Health Care, Pension Loads influencing higher costs than those recognized by OSD/OMB policy

Commodity Inflation Historical and Projected



Source: Bureau of Labor Statistics Producer Price Indices and LME Spot Prices; Global Insight 2007Q4 Projection; updated 1/18/08



Material Inflation – How does industry use recent history?

Company X vs Navy

- Company X projects 10.4% annual inflation based on Steel Vessel Material Index growth from Sep 2003 – Jun 2006 period (historical data)
- Navy uses independent assessment to project future inflation

| Company X | |
|--|---------------------------|
| Steel Vessel Material Index | |
| Reflects BLS Historical Actuals Sep 03 - Jun 06 | |
| Commodity | Inflation (Annualized) |
| Steel | 20.2% |
| General Purpose Machinery | 4.7% * |
| Electrical Machinery | 0.2% |
| Electronics | Not Included |
| Engineering Labor/Services | Not Included |
| Composite Material Inflation | 10.4% |

* Annual Steel Inflation: FY2004 = 24.2%; FY2005 = 16.6%; FY2006 = 4.9%

| Navy | |
|---|-------------------------------|
| Material Inflation FY2006-2008 | |
| Reflects 2006 BLS actuals and projections based on GI 2006Q4 Forecasts | |
| Cost Weighting | Inflation (Average Annual) |
| 7% | 3.8% |
| 50% | 3.5% |
| (Included in General Purpose Machinery) | |
| 39% | 2.8% |
| 4% | 3.2% |
| 3.2% | |
| (OSD avg 2006-08 = 2.7%) | |